

in claim 1. For it has been surprisingly found that surprisingly low emissions, particularly NO_x, can be observed for the gasoline fuels of the present invention, with the NO_x emissions being substantially lower than that predicted by the California Predictive Model established by the California Air Resources Board (CARB). Good performance with surprisingly low NO_x emissions can be obtained despite the fact that the gasoline fuel of the present invention does not meet the specifications of the CARB reformulated gasoline fuel and fails the California Predictive Model. The gasoline composition of claim 1 is substantially free of oxygenates, does not meet the flat limits for at least one, if not more, of the aromatic, T90 and/or T50 requirements set for the Phase 2 reformulated gasoline, and fails the California Predictive Model for emissions. Nevertheless, the gasoline fuel of the present invention allows one to enjoy good emissions, and particularly surprisingly low NO_x emissions, while also avoiding the potential problems of oxygenates.

The Jessup et al reference cited by the Examiner in no manner discloses or suggests the ability of a substantially oxygenate free gasoline to exhibit low emission and still offer flexibility while not meeting the requirements of the California Predictive Model. In essence, the control of sulfur in the gasolines of the present invention allow one to not meet the requirements of the California Predictive Model, yet still offer low emissions, particularly with regard to NO_x, in a substantially oxygen free gasoline. The Jessup et al reference in no manner discloses such a gasoline.

The Examiner cites Kaneko et al and Fletcher et al as references suggesting the importance of controlling sulfur. It is submitted by applicants, however, that the addition of these references in no manner cure the deficiencies of Jessup et al.

The Kaneko et al reference relates to a lead free, high octane gasoline made up of a selective class of C₅ and C₆ hydrocarbons and an oxygenate, specifically methyl-T-butyl ether (MTBE). The presence of the oxygenate MTBE is required in an amount of at least three volume percent, and up to 15 volume percent, and more preferably at least four volume percent. The presence of the oxygenate is an important characteristic of the Kaneko disclosure. The presence of the oxygenate in the Kaneko et al formulation is important to achieve its cold startability and reduction in emissions of NO_x. The present invention is substantially oxygenate free, and therefore clearly distinguishes Kaneko et al.

Indeed, Kaneko et al supports the patentability of the subject claimed invention. In particular, it suggests that the presence of an oxygenate is an important consideration for reduction of emissions of NO_x. Nevertheless, the presently claimed invention permits one to achieve reductions in NO_x while being substantially oxygenate free, and not even meeting the requirements of the California Predictive Model. Accordingly, Kaneko et al would teach away from the present invention, and underscore the non-obviousness of the claimed invention. Its combination with Jessup et al, therefore, can in no manner suggest applicants' claimed invention.

The second reference noted by the Examiner, i.e., Fletcher et al, also cannot be combined with Jessup et al to suggest applicants' claimed invention. The patent in no manner is directed to an oxygenate free gasoline which does not meet the California Predictive Model. While the patent does describe a process for reducing the amount of sulfur in a hydrocarbon stream, the process is not directed to controlling the sulfur so that the amounts are within the recited ranges of the claimed invention and the gasolines are

mixed so as to not meet the California Predictive Model. Indeed, the lack of control in Fletcher et al is demonstrated in Table 4, wherein the amount of sulfur is at least 30 ppmw and higher.

Accordingly, it is respectfully submitted that the combination of Fletcher et al with Jessup as well can in no manner suggest applicants' claimed invention.

Favorable reconsideration and withdrawal of the Examiner's rejection of the claims of record over Jessup taken together with Kaneko et al and Fletcher et al are therefore respectfully requested.

The Examiner also rejects the claims of record over Townsend et al (H1305) taken in view of Jessup et al. For the following reasons, however, the Examiner's rejection is most respectfully traversed by applicants.

The Townsend et al reference relates to reformulated gasolines, but the gasolines must include an oxygenate. Thus, if one were to combine Townsend with Jessup et al, one would simply produce an oxygenated gasoline. This is totally contrary to the presently claimed invention.

Furthermore, the Townsend et al reference in no manner discusses a gasoline which does not meet the California Predictive Model. Moreover, the Townsend et al reference, as shown in Table 1, does not control the sulfur to the extent of the presently claimed invention. Indeed, in all of the reformulated gasolines tested, the amount of sulfur was greater than 30 ppmw. The importance of controlling sulfur to provide an oxygenate-free gasoline, which exhibits good emissions yet still fails the California Predictive Model requirements, is nowhere disclosed in Townsend et al.

For the reasons discussed above, neither does Jessup et al disclose such a gasoline. Accordingly, it is submitted that the combination of Townsend et al with Jessup et al can in no manner discloses applicants' claimed invention.


Favorable reconsideration and withdrawal of the Examiner's rejection of the claims of record over Townsend et al taken in view of Jessup et al are therefore respectfully requested.

It is requested by applicants that once the Examiner has had an opportunity to review the forgoing arguments, that a personal interview be scheduled as such an interview might help to expedite the prosecution of the subject application. Accordingly, the Examiner is requested by applicants to contact the undersigned local counsel at (703) 838-6622, at the Examiner's convenience, after having reviewed the subject response.

It is believed by applicants, however, that a further and favorable action in the form of a Notice of Allowance is next in order, and is earnestly solicited.

Respectfully submitted,

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